

Appl. No. 09/745,404

Response to December 24, 2003 Office action

REMARKS/ARGUMENTS

Claims 1-28 and 32-40 are pending. No claims have been amended, added, cancelled, or withdrawn. Applicant thanks the Office for the allowance of claims 14-28 and 32-40. In view of the following remarks/arguments, withdrawal of the respective rejections and objections to the pending claims and allowance of all claims is respectfully requested.

As a preliminary matter, the response to the August 05, 2003 Office Action presented clear reasons why the cited references singly and in combination do not teach or suggest the features of the pending rejected claims. Those arguments are not repeated verbatim herein, but are incorporated by reference. The Office is urged to reconsider those arguments in view of the following additional arguments that describe why all pending claims are patentable over the references of record.

Claim Rejections Under 35 USC §103(a)

Claims 1, 4, 6-8, 11 and 13 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Patent no. 6,591,310 B1 to Johnson in view of U.S. Patent no. 6,260,084 B1 to Wilson et al ("Wilson"). These rejections are traversed.

Claim 1 recites "providing an extended configuration descriptor in firmware of a USB device, the extended configuration descriptor comprising a set of non-standard class codes", and "responsive to receiving a host-specific device request, communicating the extended configuration descriptor to a requestor." Nowhere do the references of record teach or suggest these recited features.

In addressing claim 1, the ACTION at page 3, admits that Johnson does not teach or suggest "a set of non-standard class codes". Applicant agrees. Johnson's

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teaching of a class of messages clearly does not teach or suggest of "a set of non-standard class codes", as recited by claim 1. And, a class of messages, even in view of Johnson's use of "computer program code" does not teach or suggest "a set of non-standard class codes", as claim 1 recites. It is clear that disparate unrelated terms such as "class" from Johnson's "class of messages") and "code" (from Johnson's "computer program code") cannot be piecemeal combined to arrive at the claimed "class codes", as claim 1 recites. Since Johnson does not teach or suggest "a set of non-standard class codes", Johnson also cannot teach or suggest the claimed "extended configuration descriptor in firmware of a USB device, the extended configuration descriptor comprising a set of non-standard class codes", as claim 1 recites.

In attempts to arrive at this feature, which is admitted as missing from Johnson, the ACTION relies on Johnson's teaching of sending a reply message in response to a corresponding request message if a condition is not met in view of Wilson's teaching of USB class definition, to conclude that the recited features of claim 1 is unpatentable. This conclusion is unsupportable.

Johnson's communication of a reply message when a condition is not met does not teach or suggest the claimed "set of non-standard class codes", as claim 1 recites. Adding Wilson's teaching of USB class definitions does not solve this already admitted deficiency of Johnson. In particular, Wilson, at col. 4, lines 1-18, teaches "[i]f the selected data path is through the serial link 22 and USB interface 12, then the model operates as a USB compliant device. [...] Communications with the host are performed pursuant to the USB specification[, wherein] *USB specification defined requests include standard and communication class requests.*" (Emphasis added). Such standard communications do not suggest

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that the combination of references “would have suggested codes not conforming to a particular USB specification”, as the ACTION at page 4 asserts.

Clearly, Johnson’s reply message when a condition is not met combined with Wilson’s “standard and communication class request” do not teach or suggest “an extended configuration descriptor comprising a set of non-standard class codes”, as claim 1 recites. Instead, it is respectfully submitted that a system including Johnson’s reply message in view of Wilson’s standard USB communication class requests may never communicate with a USB device using anything other than standard communication class requests—regardless of whether or not a reply message because some condition of Johnson is not met. Thus, standard communication class replies or requests do not teach or suggest “providing an extended configuration descriptor in firmware of a USB device”, wherein “the extended configuration descriptor comprising a set of non-standard class codes”, as claim 1 recites.

Accordingly, and for these reasons alone, 35 USC §103 rejection of claim 1 over Johnson in view of Wilson is improper and should be withdrawn

Additionally, nowhere does Johnson in view of Wilson teach or suggest an “extended configuration descriptor in firmware of a USB device”, as claim 1 recites. It is well known that firmware is software (programs or data) that has been written onto read-only memory (ROM). If this claim is again rejected on a similar basis in a subsequent ACTION, it is respectfully request for the Office to particularly point out where the references teach or suggest this recited feature of claim 1.

Claims 4 and 6 depend from claim 1 and are allowable over the cited combination by virtue of this dependency. For this reason alone, the 35 USC §103

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rejection of claims 4 and 6 over Johnson in view of Wilson is improper and should be withdrawn.

Additionally, claims 4 and 6 recite additional features that are not taught or suggested by the references of record. For instance, claim 4 recites "wherein the extended configuration descriptor further comprises a control function section indicating information corresponding to a function for the USB device." In addressing this feature, the ACTION at page, ¶2, asserts with respect to Johnson, that "[t]he step of determining that a 'predefined condition' has not been met would have made necessary a 'control function section' in order to generate a reply message." This conclusion is unsupportable.

At most, Johnson, at col. 5, lines 13-22, teaches a method of responding to a request message, wherein "[a] reply message need only be generated if at least one predefined condition is not met" Nowhere does this teach or suggest "a control function section", as claim 4 recites. Nowhere does Johnson teach or suggest that "a control function section" of a reply descriptor is used to determine that a predefined condition is not met. Nowhere does Johnson teach how any determination is made of whether a condition has or has not been met when deciding whether to send of a reply message. Moreover, nowhere does Johnson teach or suggest that any such predefined condition determined not to have been met by a request message of Johnson has any thing to do with "information corresponding to a function for the USB device", as claim 1 recites.

Furthermore, inherency as asserted by the ACTION at page 2 with "would have made necessary" language, cannot be predicated on what is unknown and cannot be established by probabilities or possibilities that the reply descriptor may have a "control function section" as claim 4 recites. Johnson teaches, at col. 5,

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lines 13-22, a method of responding to a request message, wherein "[a] reply message need only be generated if at least one predefined condition is not met" Nowhere does this recited passage teach or suggest that the "control function section" of claim 4 is necessarily inherent. Johnson teaches a reply descriptor—a reply descriptor that may be communicated over a USB or over RS-232 to a keyboard, mouse, joystick, scanner, printer and telephony device. This clearly does not indicate that the reply descriptor necessarily includes the "control function section" of the claimed "extended configuration descriptor". Thus, the recited features of claim 4 are not necessarily inherent in the teachings of Johnson. Moreover, nowhere does Wilson teach or suggest such a feature.

Accordingly, and for these reasons alone, 35 USC §103 rejection of claim 4 over Johnson in view of Wilson is improper and should be withdrawn

As an additional matter, for the reasons already discussed, the cited combination of Johnson in view of Wilson is completely silent with respect to the claimed "wherein the extended configuration descriptor further comprises a control function section indicating information corresponding to a function for the USB device". Instead, the Office is seemingly relying on personal knowledge to supply this missing feature of "a control function section", as claim 4 recites. "When a rejection in an application is based on facts within the personal knowledge of an employee of the office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons." 37 CFR §1.104(d)(2).

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If this rejection is maintained on a similar basis in a subsequent action, the Examiner is respectfully requested to supply such an affidavit to support this modification to Johnson in view of Wilson to arrive at "wherein the extended configuration descriptor further comprises a control function section indicating information corresponding to a function for the USB device", as recited in claim 4.

Claim 7 recites "querying a USB device using a host-specific device request to obtain a descriptor indicating a set of non-standard class codes", "determining one or more compatible device drivers based on the set of codes indicated by the descriptor", and "loading the one or more compatible device drivers to control the USB device." For the reasons already discussed, the references of record singly or in combination do not teach or suggest "a descriptor indicating a set of non-standard class codes", as claim 7 recites.

For this reason alone, the 35 USC §103 rejection of claim 7 is improper and should be withdrawn.

Additionally, the references of record singly or in combination do not teach or suggest "a host specific device request, as claim 7 recites. Nowhere do Johnson's "class messages", "computer program code", and/or replay message responsive to determining that a condition has not been met, in view of Wilson's standard USB communications classes, teach or suggest such a "host specific device request", as Applicant claims.

For this additional reason, the 35 USC §103 rejection of claim 7 over the cited combination is improper and should be withdrawn.

Moreover, claim 7 recites "determining one or more compatible device drivers based on the set of codes indicated by the descriptor." In addressing this feature, the ACTION points to Johnson, col. 13, lines 37-39, 50-51, and 60-64.

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However, these portions of Johnson merely teach that use of the reply descriptor and message flow can be flexible. By way of example, Johnson then describes intercommunication between two host drivers "in the form of request and rely descriptors as well as request and reply messages". Nowhere does this teach or suggest "determining one or more compatible device drivers based on the set of codes indicated by the descriptor", as claim 7 recites. Furthermore, Wilson is completely silent on such claimed features.

For this additional reason, the 35 USC §103 rejection of claim 7 over the cited combination is improper and should be withdrawn.

Claims 8, 11, and 13 depend from claim 7 and are allowable over the cited combination by virtue of this dependency. Accordingly, the 35 USC §103 rejections of claims 8, 11, and 13 should be withdrawn.

Additionally, claims 8, 11, and 13 include additional features that are not taught or suggested by the cited combination. For instance, claim 11 recites "a control function section indicating information corresponding to a function for the USB device." In addressing this feature, the ACTION points to the teachings of Johnson at col. 19, lines 1-10 to assert that this feature is inherent. In support of this assertion, the ACTION points to the teaching of col. 13, lines 15-17, and col. 19, line 18. It is respectfully submitted for the reasons already discussed above with respect to claim 4, that these teachings do not indicate that the claimed feature is necessarily inherent in the reply descriptor of Johnson.

For this additional reason, the 35 USC §103 rejection of claim 11 over the cited combination is improper and should be withdrawn.

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Claim Objections

Claims 2-3, 5, 9-10, and 12 stand objected to as depending upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Office for this indication of allowability. However, it is respectfully submitted that claims 2-3, 5, 9-10, and 12, as well as their respective base claims and any intervening claims, are patentably distinguished over the references of record for the reasons already discussed.

Conclusion

The pending claims are in condition for allowance and action to that end is respectfully requested. Should any issue remain that prevents allowance of the application, the Office is encouraged to contact the undersigned prior or issuance of a subsequent Office Action.

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Respectfully Submitted,

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